
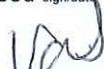

		Type: Drug Guideline	Document reference: 0559	Manual Classification: Waikato DHB Drug Guidelines
Title: Adrenaline for Neonates			Effective date: 20 August 2020	
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			Document expiry date: 20 August 2023	

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BRIEF ADMINISTRATION GUIDE

For detailed information refer to [The Australasian Neonatal Medicines Formulary guidelines: adrenaline IV infusion](#) [adrenaline IV bolus](#) [adrenaline intratracheal bolus](#) [adrenaline nebulised](#)



Critical Note: there are minor variations between the ANMF and Waikato DHB best practice within this drug guideline – see **yellow shaded text**

- Indications**
- 1) Cardiac resuscitation
 - 2) Relief of upper airways obstruction
 - 3) Refractory hypotension

- Route:**
- Intravenous (bolus and infusion), preferably via UVC
 - Intracardiac
 - Intratracheal
 - **Buccal** (if other routes are unavailable i.e. last resort)
 - Injection supplied as: adrenaline 1 in 10,000 injection (0.1 mg/mL) 10 ml ampoule and adrenaline 1 in 1,000 injection (1 mg/mL) 1 mL ampoule

- Dose:**
- 1) **Cardiac Resuscitation**
Slow IV push or intracardiac (over 3-5 minutes)
0.1– 0.3 mL/kg/dose of 1:10,000 concentration
Intratracheal
0.5-1 mL/kg/dose (0.05 to 0.1 mg/kg) of 1:10,000 concentration via ET tube.
Repeat dose every 3 to 5 minutes as necessary
 - 2) **Relief of upper airways obstruction**
Nebulised (unlicensed indication, permitted under Section 25 of the Medicines Act)
0.1 mL/kg of 1:1,000 concentration
 - 3) **Refractory hypotension**
Continuous IV infusion
0.1 mcg/kg/minute up to a usual maximum of 1 mcg/kg/min via CVAD

Preparation and administration

Slow IV push, intracardiac and intratracheal

Draw up dose prescribed of 1:10,000 concentration and administer over 3 to 5 minutes.

Nebulised



Draw up dose prescribed of 1:1,000 concentration and dilute up to 2 mL with sodium chloride 0.9%. Bag in over at least 5 minutes

Continuous IV infusion

- Draw up adrenaline with compatible fluid (sodium chloride 0.9%, glucose 5% or glucose 10%) as per 'NICU Drugs' computer software available on all desktops in the NICU, or as per prescription instructions
- Wrap tubing in tinfoil and cover syringe
- Administer via CVAD at prescribed rate

Buccal

Draw up dose prescribed and administer in the mouth between the gum and cheek.

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Monitoring

- Continuous blood pressure monitoring or 5 minute BP recordings
- Continuous cardiorespiratory monitoring
- Document vital signs hourly and PRN
- Assess need for endotracheal suctioning. Mucous plugs may become more difficult to dislodge
- Observe IV site for signs of infiltration

Storage and Stability

- Change solutions 8 hourly or more frequently if BP not maintained. Adrenaline in solution is decomposed by light and air and solutions that are pink or brown in colour or contain particles should not be used.
- Discard ampoule after opening.

Competency for Administration

Administration of nebulised adrenaline & continuous infusion ONLY:

This procedure is carried out by, or under, the direct supervision of a registered nurse/ registered midwife who holds current Waikato DHB generic Medicine Management and IV certification **and** Neonatal specific certifications NCV/NAC and NIC2, as well as Guardrails competency.

Administration of intracardiac adrenaline, slow IV push and endotracheal adrenaline are all given during resuscitation with medical staff managing the administration: This is a medical staff only procedure and should be administered with a 22 gauge needle.

Guardrails Information

Adrenaline is Guardrail profiled on the CC pump for NICU. Following are the guardrail limits:

Guardrails Drug Name	Adrenaline			
Profile	0.4-1kg	1-2kg	2-3kg	3-5kg
Concentration (mcg/ml)				
Minimum	12	30	60	90
Maximum	120	600	900	1000
Dose rate (mcg/kg/min)				
Soft minimum	0.05	0.05	0.05	0.05
Default	0.05	0.05	0.05	0.05
Soft maximum	2	2	2	2
Hard maximum	5	5	5	5

References

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